Edwards Air Force Base NPL

Size: 301,000 acres
Mission: Research and develop aircraft
HRS Score: 33.62; placed on NPL in August 1990
IAG Status: Federal Facility Agreement signed in 1990
Contaminants: Waste oils, solvents, VOCs, petroleum hydrocarbons, petroleum/oil/lubricants, rocket fuel, and heavy metals
Media Affected: Surface water, sediment, groundwater, and soil
Funding to Date: $124.6 million
Estimated Cost to Completion (Completion Year): $245.6 million (FY2015)
Final Remedy in Place or Response Complete Date for All Sites: FY2004

Kern County, California

Restoration Background

In FY93, an Expanded Source Investigation and a RCRA Facility Assessment identified solid waste management units and the following site types: underground storage tanks (USTs), fuel pipelines, landfills, hazardous waste disposal areas, and wastewater and surface water runoff collection areas.

Interim Remedial Actions (IRAs) have included installation of four groundwater extraction and treatment systems to remove JP-4 jet fuel and solvents; removal of 327 USTs; removal of 843 drums of hazardous waste from, and capping of, one site; stabilization of soil to immobilize dioxin and heavy metals; replacement of leaking JP-4 jet fuel pipelines; capping of the fire training facility; implementation of bioventing at three sites; implementation of two soil vapor extraction (SVE) and treatment systems to remove volatile organic compounds (VOCs); installation of a fence at a landfill; and implementation of in-well vapor stripping at a solvent disposal area. Removal Actions were conducted at 12 sites. Edwards expanded public participation by including four public members on the technical review committee and developing four public information repositories.

In FY96, using bioventing, the installation cleaned and closed a former UST site ahead of schedule. An innovative bioremediation treatment facility was opened to remediate soil contaminated with petroleum products. The installation began five Interim Actions. IRAs began at Operable Unit (OU) 1 with construction of two 2-phase extraction systems to remediate petroleum hydrocarbon and VOC contamination in groundwater and soil. At OU2, IRAs were conducted to activate a bioventing system and to begin construction of a 2-phase extraction system. Decision documents were signed for 40 areas of concern (AOCs) in OUs 1 and 2.

In FY97, 24 early actions and 15 site cleanups occurred. The Sampling Technology, Assessment and Remediation (STAR) program, and the Base Environmental Analysis Laboratory (BEAL), an on-base laboratory, were used to accelerate fieldwork. All three dual-phase extraction systems constructed in FY96 began operation in FY97.

The Restoration Advisory Board has been actively providing input since January 1995 and distributes a monthly newsletter to more than 5,000 stakeholders.

FY98 Restoration Progress

The STAR program was used to investigate 23 AOCs and further characterize contamination at 9 sites. An outside laboratory was contracted to help the BEAL with analyses from sampling.

The installation used regulatory oversight to streamline 46 AOC and site reports, which were used instead of the more time-consuming RI reports.

Five Engineering Evaluations and Cost Analyses (EE/CAs) and three Treatability Study work plans for high-relative-risk sites were completed and approved by regulatory agencies. Eight sites at the South Base area were cleaned up, and biovent units were installed at five sites. No Further Investigation (NFI) letters were signed for 27 sites and AOCs. Mobile free-product recovery systems recovered 2,865 gallons of fuel (in well skimmers removed an additional 281 gallons of fuel) from the groundwater aquifer for a total of 19,214 gallons to date. By implementing early actions, the installation reduced the high-relative-risk ranking at 13 sites.

A two-phase treatment system at Site 45 reduced contaminants to levels that no longer require catalytic oxidation. The catalytic oxidizer was moved to the newly constructed SVE system at Site 11. Carbon filtration is being used to remove the remaining contamination at Site 45. The installation partnered with EPA Region 9 to establish a multiphase, multicomponent data quality management program to ensure accuracy of laboratory data.

The installation tracked the following items as indicators of business performance: NFI status letters and RA completion certificates, to track site closures; number of gallons removed, to track performance of the mobile free-product and bioslurper recovery systems; and tons of contaminated soil treated, to track performance of a bioremediation facility.

Plan of Action

- Continue STAR program for investigating AOCs and sites in FY99
- Test biotrickling filter technology at Site 17 in FY99
- Perform an Ecological Risk Assessment of the Piute Ponds and other areas in FY99
- Install pump-and-treat systems at Sites 37 and 133 in FY99
- Continue LTM, groundwater studies, and remediation in FY99-FY00
- Test four technologies at Site 85 in FY99-FY00

FY99 Funding by Phase and Relative Risk